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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/509,395

09/28/2004

Kenji Ogawa

2004-1440A

5812

513 7590 09/06/2007  
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EXAMINER

PHAM, TAMMY T

ART UNIT

PAPER NUMBER

2629

MAIL DATE

DELIVERY MODE

09/06/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/509,395

Applicant(s)

OGAWA ET AL.

Examiner

Tammy Pham

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 September 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9-28-04, 6-26-07</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. Figure 8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al. (US Patent No: 6,466,186 B1).

**In regards to independent claim 1**, Shimizu teaches of a method of driving a plasma display panel (Fig. 2, item 21) including a discharge cell (not shown), the discharge cell (Id.) being formed at an intersection of a scan electrode (Fig. 1, item 3) and a sustain electrode (Fig. 1, item 4), and a data electrode (Fig. 1, item 7), the method comprising: dividing one field period (Fig. 4, the combination of SF1-8) into a plurality sub-fields (Fig. 4, items SF1-8), each

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comprising an initializing period (Fig. 7), a writing period (Id.), and a sustaining period (Id.); providing a first sustaining period (Fig. 8, t7-8) and a second sustaining period (Fig. 8, t11-12) in a sustaining period (Fig. 8) of at least one sub-field (Id.), in the first sustaining period (Fig. 8, t7-8), a sustain pulse having a first leading edge (Id.) duration, and in a second sustaining period (Fig. 8, t11-12), the sustain pulse having a second leading edge (Id.) duration; and disposing the second sustaining period (Id.) at least at an end of the sustaining period (Fig. 8).

Shimizu fails to teach that in the second sustaining period (Fig. 8, t5-t8), the sustain pulse having a second leading edge (Fig. 8, t7-t8) duration shorter than the first leading edge duration.

Applicant has not disclosed any specific advantage or criticality to having a decreasing pulse versus an increasing pulse. As such, the <sup>de</sup>creasing pulse is an obvious matter of design choice.

It would have been obvious to one with ordinary skill in the art at the time the invention was made to have the sustain pulses be increasingly shorter or longer, since both would perform equally well at stabilizing the writing discharge (Shimizu, column 3, lines 26-29).

**In regards to claim 2**, Shimizu teaches that a sustaining period (Fig. 8) of a sub-field (Id.) disposed just before a sub-field (sub-field after the one shown in Fig. 8) in which the discharge cell discharged in the sustaining period is selectively initialized includes the first sustaining period (Fig. 8, t7-8) and the second sustaining period (Fig. 8, t11-12, column 8, lines 39-42).

**In regards to claim 3**, Shimizu teaches that the second leading edge duration (Fig. 8, t11-12) is set to a value substantially causing no self-erase discharge (Fig. 8, pulse value during t11-12 is a non-zero value).

**In regards to claim 4**, Shimizu teaches that the duration of the second sustaining period (Fig. 8, t11-12) is changed according to a percentage of lit discharge cells (Fig. 9, lines 38-45).


*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tammy Pham whose telephone number is (571) 272-7773. The examiner can normally be reached on 8:00-5:30 (Mon-Fri).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TP  
27 August 2007

  
*Tammy Pham*  
Patent Examiner  
Art Unit 2629

  
SUMATI LEFKOWITZ  
SUPERVISORY PATENT EXAMINER